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ABSTRACT

This study compared face-to-face and video classroom instruction and assessed self-reported educational outcomes and intent to persist for a population of 274 student inmates at 9 prisons. Consistent with student-institution fit literature, the strongest positive and direct influences on educational outcomes are faculty classroom effectiveness, peer interactions, and being female. Learning via distance, in this case video, has a direct negative influence on faculty and peer interactions, a negative but indirect influence on outcomes, a positive influence on intent to persist in the course and semester, but no association with intent to persist in the degree program. (Contains 3 tables and 23 references.) (Author/SLD)

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The Impact of Instructional Delivery on Learning Outcomes and Intent to Persist

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Abstract

This study compares face-to-face and video classroom instruction and assesses self-reported educational outcomes, and intent to persist for a population of 274 student inmates at nine prisons. Consistent with student-institution fit literature, the strongest positive and direct influences on educational outcomes are faculty classroom effectiveness, peer interactions, and being female. Learning via distance, in this case video, has a direct negative influence on faculty and peer interactions, a negative but indirect influence on outcomes, a positive influence on intent to persist in the course and semester, but no association with intent to persist in the degree program.

The Impact of Instructional Delivery on Learning Outcomes and Intent to Persist

Introduction and Problem Statement

The academic disciplines of criminal justice and higher education have provided little evidence to document the effects of educational participation during inmate incarceration (Almond, 1989; Boaz, 1976; Cheatwood, 1988; Wolf & Sylves, 1981). Research has been hindered by changing societal beliefs about the rehabilitative potential of incarceration, as well as by political and program funding decisions. Pell Grant eligibility and funding for inmates was eliminated in 1994 with the passage of the Violent Crime Control Act. The lack of valid, rigorous research contributed to the downfall of programs since there was little hard evidence in favor of maintaining their existence.

Nevertheless, the enormous growth in the American prison population and the growing importance of educational opportunity and attainment for both individuals and society gives some weight to the need for such research. The theoretical purposes of both traditional higher education and corrections are complimentary; higher education attempts to provide an environment for gaining new knowledge, skills and educational advancement, while corrections applies the principal that attitudes, ideas and behavior can be changed through rehabilitation (Gehring, et al, 1998). However, countless research studies of effectiveness in traditional higher education continue to be produced while college level programs in correctional facilities lack proper evaluation. Few have attempted to apply the current student outcomes models to inmate learners, and decisions about funding for post secondary programs in prisons are often made in the absence of alternatives supported by evidence.

Conceptual Frameworks

In designing this study, we drew upon appropriate frameworks from the scholarly literature. The most **traditional** view is that pre-college characteristics like student family backgrounds, academic preparedness for college, and clear goals are the main factors accounting for differences in academic performance, persistence behavior, and other educational outcomes (Feldman & Newcomb, 1969; Astin, 1991; Stark et al. 1989; Willingham et al. 1985).

A second group of alternative yet complementary perspectives fall under the general description of **student-institution fit models** (Pascarella & Terenzini, 1991). These models generally suggest that student persistence and growth depends on the degree of successful integration into the academic and social structures of the institution, and on the amount of student involvement and effort.

A third relevant framework for this study derives from the literature on **self-efficacy** -- a person's judgment of their capabilities to act in order to attain their desired goal or performance (Bandura 1986). Self-efficacy affects choice of activities, goal formulation, effort and persistence to degree attainment (Bandura, 1977; Lent, Brown & Larkin, 1984; Schunk, 1991). Research on inmates has found that the longer a student is in prison, the lower the self-efficacy scores (Parker, 1990).

Based upon these three branches of the scholarly literature, we assume that inmate educational outcomes and reported gains and intent to persist are BI-products of the following factors: demographic backgrounds (including age, sex, and ethnicity), length of prison sentence, instructional method (traditional classroom versus distance), and learning context (faculty effectiveness in the classroom, peer interaction, and learning environment). This research focuses on the role of instructional method, controlling for these other potential influences.

Research Design and Methodology

This study utilizes a cross-sectional research design, collecting information at a single point in time. The subjects of this study are 274 inmates (out of 279 enrolled) from nine correctional institutions in a single state. The survey was administered to 111 students in traditional courses and 163 students in distance education courses. The survey was kept confidential and completely voluntary. The inmates completed the questionnaire within twenty minutes. Several factors prevented the study from following a longitudinal design, including restrictions on information access, confidentiality, and the extreme transience of the prison population due to probation and parole, prison transfers, and programming re-assignments.

Based on the outcomes and self-efficacy literature, 44 survey items were designed in the areas listed in Figure 1. In each category, item construction was grounded in theory and research to ensure construct validity. To ensure face or content validity, we consulted experts in higher education and criminal justice, and used a practitioner focus group to assist with item formulation. Survey items were developed, pilot tested, and subsequently revised.

Demographic Information- includes age, race, gender, length of sentence, and work hours.

Instructional Method- Students enrolled in distance education courses were coded '1', traditional classroom courses coded '0'.

Faculty Effectiveness- This six-item scale measures the nature of classroom interaction between inmates and their instructors. These six items are drawn from the classroom involvement scale developed by Terenzini, et al (1982, 1984) and adapted for this study (alpha= .89).

Peer Interaction- This five-item scale measures the nature of the interactions between inmates and their student peers. These five items are drawn from the peers sub-scale of the Mattering

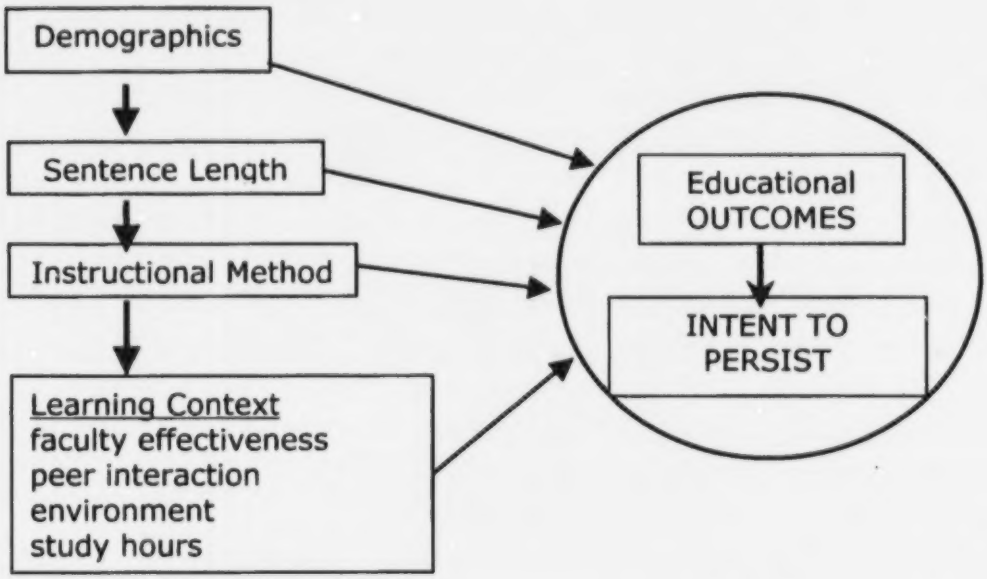
Scales For Adult Students in Post-secondary Education (Schlossberg et al., 1990) and modified to meet the needs of this study (alpha=.83).

Learning Environment- This scale is measured by five items describing the learning environment, drawn from the Learning Environment Inventory (Fraser, Anderson, Walberg, 1982), originally designed to assess the classroom learning climate of secondary students, and later adapted to successfully assess the learning environment of college classrooms (Ellet, 1976; Kent & Fisher 1997). The five items were adapted to meet the needs of this study (alpha=.69).

Educational Outcomes- As suggested by Figure 1, a scale of educational outcomes is treated first as a dependent variable, then as an independent predictor of persistence. The outcomes scale is measured by six domains describing career preparation, gains in job skills, problem solving, openness to new ideas, control, and civil responsibility. These six items are drawn from the Noel-Levitz College Student Inventory (Stratil & Schreiner, 1993) and modified to meet the needs of this study (alpha=.86).

Intent to Persist – Two items based on Bandura's concept of self-efficacy, were used to measure intent to persist in the course. Students rated their confidence in completing the course and semester on a 1 to 5 scale (alpha=.76). Three items also based on Bandura's concept of self-efficacy, were used to measure intent to persist towards a degree. Students rated their confidence in persisting to degree attainment on a 1 to 5 scale (alpha=.92).

Figure 1: Research Design Model



Results for Educational Outcomes

We analyzed the relationships among the variables using OLS regression and entered the variables in blocks with listwise deletion of cases. The results are shown in Table 1 and summarized below. The final equation (Model 4) is robust and accounts for almost 36% of the variance in perceived outcomes. The findings from this highly controlled population of prison inmates look very similar to the results we typically have found in outcomes studies of traditional college students.

- *Being female is positively associated with Educational Outcomes.*
- *Faculty classroom effectiveness is highly influential and positive.*
- *Peer Interaction is highly influential and positive.*
- *Inmates receiving distance instruction report significantly lower outcomes, but the influence is indirect.* This particular type of distance instruction exerts a direct negative influence on the measures of the Learning Context, especially Faculty Effectiveness and Peer Interaction, and they in turn influence Outcomes.
- Ethnicity, age, length of prison sentence, and hours of work and study are not significant.

Table 1: OLS Regression Results for Educational Outcomes

Variable Block	Model 1 Std. Beta	Model 2 Std. Beta	Model 3 Std. Beta	Model 4 Std. Beta
1. Demographics:				
Female	**.229****	**.228****	**.136***	**.113***
Minority	-.022	-.022	.003	-.041
Age	-.026	-.025	.050	.007
Work Hours	-.077	-.076	-.036	-.072
2. Length of Sentence		-.006	-.006	-.067
3. Distance Education			**-.252****	-.066
4. Learning Context:				
Faculty Effectiveness				**.262****
Peer Interaction				**.379****
Learning Environment				.066
Study Hours				.002
Total R2	**.052****	**.052****	**.101****	**.357****

* = p<.05 ** = p<.01

Results for Intent to Persist in Course/Semester

We analyzed the relationships among the variables using OLS regression and entered the variables in blocks with listwise deletion of cases. The results are shown in Table 2 and summarized below. The final equation (Model 5) is robust and accounts for 37% of the variance in intent to persist in the course/semester.

- Gender, Ethnicity, Age, Sentence Length, and hours of work and study are not significant
- *Distance education students report significantly higher Intent to Persist in the Course/semester, controlling for all other influences.*
- *Faculty Effectiveness is highly influential and positive –twice as influential as learning outcomes and three times as influential as mode of instruction.*
- As we saw in Table 1, *Peer Interaction* exerts a direct positive influence on the outcomes measure, but in Table 2 peer influence on Intent to Persist in Course is indirect, as its influence disappears once the Outcomes measure is added in Model 5.
- *There is a strong positive statistical connection between perceived Outcomes and Intent to Persist in the Course/semester.*

Table 2: OLS Regression Results for Intent to Persist in Course/Semester

Variable Block	Model 1 Std. Beta	Model 2 Std. Beta	Model 3 Std. Beta	Model 4 Std. Beta	Model 5 Std. Beta
1. Demographics:					
Female	.103	.103	.080	.080	.055
Minority	-.042	-.042	-.035	-.031	-.022
Age	-.014	-.014	.005	-.084	-.086
Work Hours	.058	.058	.067	.012	.028
2. Length of Sentence		.000	.000	-.044	-.029
3. Distance Education			-.064	**.154****	**.168****
4. Learning Context:					
Faculty Effectiveness				**.528****	**.470****
Peer Interaction				**.183****	.100
Learning Environment				-.009	-.023
Study Hours				.082	.081
5. Outcomes					**.219****
Total R2	**.017**	**.017**	**.021**	**.339****	**.370****

* = p<.05 ** = p<.01

Results for Intent to Persist in Degree

We analyzed the relationships among the variables using OLS regression and entered the variables in blocks with listwise deletion of cases. The results are shown in Table 3 and summarized below. The final equation for degree persistence (Model 5) is not as robust as for outcomes and course persistence, and accounts for 15% of the variance.

- *Age is significant.* Results show that younger students (30 years and younger) are more likely to indicate positive Intent to Persist in Degree than older adults (older than 30 years)
- Being *female* directly influences Intent to Persist in Degree through Model 3. Once Learning Context is added to the model, Gender is no longer significant.
- Ethnicity, Work Hours and Sentence Length are not significant.
- *Distance education has no effect* on Intent to Persist in Degree.
- Results indicate inmates who experience *gains in Educational Outcomes* are also likely to report higher Intent to Persist towards a Degree, controlling for other factors.

Table 3: OLS Regression Results for Intent to Persist in Degree

Variable Block	Model 1 Std. Beta	Model 2 Std. Beta	Model 3 Std. Beta	Model 4 Std. Beta	Model 5 Std. Beta
1. Demographics:					
Female	**.156***	**.154***	**.144***	.130	.098
Minority	.104	.104	.107	.077	.089
Age	**-.146***	**-.144***	**-.136***	**-.155***	**-.157***
Work Hours	-.012	-.010	-.006	-.024	-.004
2. Length of Sentence		-.009	-.009	-.012	-.007
3. Distance Education			-.026	.026	.045
4. Learning Context:					
Faculty Effectiveness				.013	-.059
Peer Interaction				**.202****	.097
Learning Environment				.021	.003
Study Hours				.104	.104
5. Outcomes					**.277****
Total R2	**.047***	**.047***	**.048***	**.104****	**.154****

* = p<.05 ** = p<.01

Conclusions

The phrase "culture of failures" (Roundtree et al, 1982: 17) is often used when describing the inmate population; however, "if an educational approach can help modify this sense of failure, such an approach deserves attention." Since self is an important determinant of personal adjustment among minority college students, especially inmates, sources of positive self-expectations can be modeled in higher education programming within correctional institutions (Solberg & Villarreal, 1997). The findings of this study should encourage change in existing correctional education program structures, by providing more opportunities for faculty and peer interactions.

There is a belief in the correctional community that educational programs are wasted on long-term prisoners and that they are not motivated to learn. This study finds that sentence length is not significantly associated with student outcomes or intent to persist. As shown in the statistical analysis, inmates with varying sentence lengths reported similar gains in outcomes and intent to persist in both course and degree. Admission criteria for inmate access to college programs should reflect these findings. Program participation should not be limited by sentence length, as it is now in most states. Inmates incarcerated for longer periods of time should not be denied post-secondary educational opportunities just because they will not be released anytime soon.

Another important finding in the study relates to gender. As a whole, there are far fewer female correctional facilities across the nation. Since this study indicates that females are associated with positive outcomes and intent to persist, college programs should be encouraged to expand for women audiences within the correctional system. All incarcerated individuals should be afforded the same level of education experiences, regardless of gender.

Our research suggests that traditional classroom instruction is generally superior to video instruction for promoting favorable educational outcomes among student inmates. For reasons of both budget constraints and security, correctional distance education continues to rely substantially on correspondence courses and videotapes. All other things being equal, our findings indicate that videotape delivery, as distinct from face-to-face instruction, results in lower educational outcomes, higher intent to persist in courses, and appears to have no influence on intent to persist to degree completion. While faculty effectiveness and educational outcomes are the most influential contributors to course persistence, video instruction may be preferred by many prisoners because of its predictability and their need for educational structure. This finding is not necessarily consistent with what we know about the value of active versus passive learning. However, the positive to neutral impact of video instruction on inmate persistence is perhaps overshadowed by its negative impact on educational outcomes. Thus, we remain skeptical about the effectiveness of video instruction for this population, and we clearly are not prepared from this study to draw conclusions about the use of more advanced technologies and synchronous learning among inmates. Method of instruction has never before been examined as an indicator of inmate educational outcomes, nor as a contributor to low recidivism. Thus, more research is needed on prison culture, instructional method, and inmate learning.

An important conclusion determined by the literature review and this study is that post-secondary educational outcomes, result from multiple influences (Wolf & Sylves, 1981). Studies on traditional college campuses and prisons alike have shown that multiple variables contribute to student success, learning, and persistence. Further research is needed with inmate students to draw the connection between education and reduced recidivism.

In summary, this study examines the relationships among instructional delivery method, student outcomes, and intent to persist in both course and degree for a population of 274 inmates participating in college programs at nine Maryland State prisons. Consistent with the existing higher education research and literature, faculty classroom effectiveness and inmate peer interactions exert the strongest positive and most direct influences on educational outcomes; and these outcomes in turn have the strongest impact on intent to persist. Video delivery, as distinct from traditional face-to-face instruction, has a direct negative effect on faculty and peer interactions, and an indirect negative effect on educational outcomes. Being female is positively associated with higher outcomes and intent to persist, encouraging the continued and expanded college programming opportunities for women inmates. An unexpected finding is the insignificance of sentence length on both student outcomes and intent to persist, thus supporting more flexible admission criteria for post-secondary correctional programs. Finally, the measures of ethnicity, work hours, and study hours are not influential predictors.

With the continued growth of technology and new distance education avenues, the opportunities for new and enhanced programs have increased. Educators and program administrators need not answer how can we *teach* utilizing distance instruction technology, but instead, how can we *maximize* student learning (Champagne, 1998: 90). Hopefully this study will enable more positive changes and informed decision-making opportunities for practitioners in the field of correctional education and encourage additional areas of research for academics engaged in student development theory.

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